RSE Task

The program receives an input from the command line of two Roman Numerals, sum them and output them in standard output as a Roman Numeral.

Compiling

- In Windows, to compile the source code call run.bat from the command line inside the running directory.
- In Linux, to the compile the source code open the terminal in the running folder, and type:
  - gfortran-8 -c modules.f90 in order to create the modules.o object.
  - gfortran-8 -o RomanNum RomanNum.f90 modules.o -Wall -fcheck=all in order to compile the test version of the program.
  - gfortran-8 -o RomanNum RomanNum.f90 modules.o in order to compile the final version of the program.

Compiled with

- In Windows, the Intel Fortran Compiler 64bit 17.0.1.143 was used to compile the source code. Call ifort -version to check the compiler version.
- In Linux, the gFortran Compiler v8.2 was used to compile the source code. Call gfortran-8 --version to check the compiler version.

Running

- In Windows call RomanNum <Roman Numeral 1> <Roman Numeral 2> inside the running directory, for any valid Roman Numeral.
- In Linux call ./RomanNum <Roman Numeral 1> <Roman Numeral 2> inside the running directory, for any valid Roman Numeral.

Testing

- In Windows
  - To test output from valid input, call qrun from the command line inside the running directory in order to call RomanNum I <Roman Numeral>, where Roman Numeral takes all values from I to MMMCMXCIX (1 to 3999). Sum should output all values from II to MMMM.
  - To test output from invalid input, call runascii from the command line inside the running directory in order to call RomanNum I <ASCII>, where ASCII represents all 256 ASCII characters. ASCII includes space-like characters as well as the valid Roman characters. When the former are detected an error will specify that the argument contains a null string. When the latter are detected, normal operation will commence, and the expected sum will be shown.
- In Linux
  - To test output from valid input, call ./qrun.sh ronsPlain.txt from the command line. The script will call ./RomanNum I <Roman Numeral>, where Roman Numeral takes all values from I to MMMCMXCIX (1 to 3999). Sum should output all values from II to MMMM.
  - To test output from invalid input, call .qrun.sh asciiPlain.txt from the command line inside the running directory in order to call ./RomanNum I <ASCII>, where ASCII represents all 256 ASCII characters. ASCII includes space-like characters as well as the valid Roman characters. When the former are detected an error will specify that the argument contains a null string. When the latter are detected, normal operation will commence, and the expected sum will be shown.

Coding style tests

- None yet.

Acknowledgments

The algorithms handling the roman-to-number and number-to-roman transitions originate from rosettacode.org website.

- https://www.rosettacode.org/wiki/Roman_numerals/DECODE#Fortran
- https://www.rosettacode.org/wiki/Roman_numerals/Encode#Fortran